

## Fluoridation

TO THE EDITOR: Your editorial comment in the May issue written by Professor Newbrun, "Water Fluoridation and Dietary Fluoride Ingestion" [122:437-442, May 1975], is so full of inaccuracies, that it can not remain unchallenged. Such inaccurate and biased reporting is not worthy of your excellent journal.

Professor Newbrun emphasizes *concentration* of fluoride, and regrets that Dr. Lee has confused *dosage* with *concentration*. I believe Professor Newbrun is the one who is confused. Dosage is the *only* measurement used in pharmacology, except for topical application; concentration is used only in *toxicology*. All orally or parenterally administered substances for the prevention or treatment of illness, including those also occurring in nature, are measured in grams (solids), cc (liquids) or units (those substances which can be standardized only biologically). I know of no exceptions. If concentration is used, it is *always* qualified by a definite amount. "20 cc of a 10 percent solution" obviously means the same as 2 grams. Even toxicology prefers to use dosage whenever possible (the fatal dose of substance A is B grams, not C percent or D ppm). Concentration is limited to circumstances, where dosage-measurements cannot be carried out, such as chemical contaminants in air or water, including purposely added contaminants.

It is indeed true, that data on dietary fluoride ingestion are sparse and unreliable. That should be reason to stress research in that field, before adding additional fluoride.

All the studies on children about presence or absence of toxic side effects in fluoridated and nonfluoridated areas were probably well intended. But they have two faults, which make them totally irrelevant: (a) None of the studies was double-blind; (b) Such a study tries to obscure the fact that fluoridated water is consumed by everybody in any age, not only by children. The studies should have been carried out on *old* people, who have consumed fluoridated water for a lifetime. In old people the findings might have been different.

Alternate methods to fluoridation are much better than Professor Newbrun wants us to believe. Table 3 in his article, page 439 (Cost and Efficacy of Fluorides in Various Forms) is based on the author's imagination and desires. There are no controlled studies comparing different

methods of administration. Fluoride tablets or drops are indeed administered only once a day, but there is no study showing that this is inferior. Frequent administration is desirable only where high *blood-levels* have to be maintained. *Tissue* absorption of ingested fluoride is spotty anyway, as shown by the fact that in fluorosis the teeth are mottled rather than uniformly discolored. Besides, we do have the technology to put fluoride in slow-release form. The notion that with fluoridated water the teeth are bathed in fluoride repeatedly during the day is also misleading. Fluoridated water contains 1/10,000 percent of fluoride, while fluoride solutions used for topical treatment contain 1 percent fluoride. Fluoridated water has no topical effect whatever, regardless of the length of time or frequency it is in contact with the teeth. Even the cost has been misstated. I do not know the actual cost of water fluoridation, but the cost of fluoride tablets or drops should have been listed as "zero to \$4.00." Most children take vitamin pills or drops anyway, and the vitamins with fluoride cost the same as without; the additional fluoride is free. Even taking fluoride pills alone, the cost to the public is less than \$4.00 per year. I priced several leading pharmacies, not chain-pharmacies. If Professor Newbrun cannot obtain the fluoride at this price, I will be happy to furnish it to him and still make a handsome profit.

I hope that you will print this letter in a spirit of fairness.

MAX SCHLACHTER, MD  
Oakland

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TO THE EDITOR: Advocates of fluoridation of public water supplies may well succeed in their effort to impose this treatment on every citizen. But those of us free of that arrogance which assures us that we know what's best for everyone else still take umbrage at statements such as Dr. Lee's. In his article in the issue of May 1975 entitled "Optimal Fluoridation" [Lee JR: Optimal fluoridation—The concept and its application to municipal fluoridation. West J Med 122:431-436, May 1975], he mentions enforcement of fluoridation "by the process of majority vote, itself a technique quite curious and unique among public health affairs."

This "technique" of course reflects the poorly articulated realization that fluoridation is not and never has been a public health measure. Dental caries may be of great public concern, but is not